



BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application of:
John P. Karidis

Before the Examiner:
Christopher B. Shin

Serial No.: 09/756,831

Group Art Unit: 2182

Filed: January 08, 2001

Title: WIDE SCREEN NOTEBOOK
INPUT/OUTPUT DEVICE INTERFACE

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REPLY BRIEF

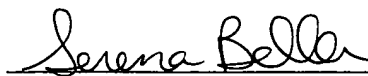
Mail Stop AF
Commissioner for Patents
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In response to the Examiner's Answer having a mailing date of May 19, 2004 with a two month statutory period for response set to expire on July 19, 2004, Appellants respond as follows:

The Examiner states in (7) Grouping of Claims of his Examiner's reply that the Appellant's statement that certain claims do not stand or fall together is not agreed with because the Appellant fails to separately argue between Claims 1-10 and Claims 11-14. This is not a true

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Signature

Serena Beller

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statement. The Appellant cannot present arguments against art that were not presented by the Examiner.

The Examiner stated that Claims 11-14 are not patentably distinct from Claims 1-10 and that the teachings of the claims 1-10 are similarly applied. The Appellant's stated that Claims 11-14 recite method steps for interfacing an I/O device to a notebook computer and Claims 1-10 recite a notebook computer. The notebook computer of Claims 1-10 has features that employ method steps of Claims 11-14 and as such are both patentable. To the extent that the notebook computer of Claims 1-10 explicitly implement a method step of Claims 11-14, the Appellant has already shown that *Trane* does not teach or suggest these limitations. Therefore, the Appellant asserts that the rejections of Claims 11-14 under 35 U.S.C. § 103(a) as being unpatentable over *Trane* are traversed for the same reasons as Claims 1-10. The Examiner did not point out where *Trane* taught or suggested specific steps in the method of Claim 11. The Examiner simply stated that all his arguments relative to Claims 1-10 apply to Claims 11-14. The Appellant stands by the arguments presented to traverse the rejections of Claims 1-10. Therefore, to the degree that the method steps of Claims 11-14 were rejected by the Examiner for the same reasons as Claims 1-10, the Appellant stated that the arguments presented in traversing the rejections of Claims 1-10 equally apply to the traverse of the rejections of Claims 11-14. The Appellant separately addressed the rejections of Claims 11-14 in the same manner as these rejections were presented by the Examiner. The Appellant strongly disagrees with the Examiner's statement that the rejections of Claims 11-14 were not separately addressed. Therefore, the Appellant asserts that Claims 1-14 are to be considered individually per the reasons stated in the Appeal Brief.

New Examiner arguments:

(1) The Appellant argued on page 4, last 3 lines of the Appeal Brief that "*Trane* does not teach any specific relationship between the keyboard base, the keyboard, or the cellular telephone inserted into the keyboard base." The Examiner states his belief that this is not correct and states that "*Trane* clearly teaches, in detail, the relationship between the keyboard base, the keyboard, and the cellular telephone into the keyboard base." In support of this argument, the Examiner recites *Trane*, columns 1-9. The Appellant was not arguing that *Trane* had no relationship defined between his disclosed elements; rather, the Appellant was arguing that *Trane* had no required design relationship as stated in the claims of the present invention. Relative to the keyboard, *Trane* states in column 5, lines 17-22, that "the keyboard 24 can be a

compact personal computer keyboard typically found on conventional portable computers or can be a custom size keyboard, depending on the needs and desires of the manufacturer and/or user and the size of keyboard 24 which can fit within the portable computer assembly 10." *Trane* is teaching that the keyboard is of such a size that fits into his portable computer assembly 10. The size of keyboards are determined by the number and size of the keys. There are many more keys in the horizontal rows than in the vertical columns, therefore width of the keyboard (horizontal direction) is larger than its height (vertical direction). Displays are rectangular with the width again larger than the height (a typical aspect ratio would be 4/3). A 12 inch display would be approximately 12 inches wide and 9 inches high. A full size keyboard for a portable computer would be typically 11.5 inches wide (horizontal direction) and 5 high (vertical direction). Therefore, a full size keyboard and a somewhat standard portable computer display have about the same width but there is about 4 inches difference in their height. *Trane* placed his telephone in the vertical space present due to the normal differences between the heights of displays and keyboards. *Trane* does not widen his keyboard base; rather, he uses the normal unused area for his telephone. This is what the Appellant was trying to convey in the argument that there was no specific (design) relationship between the keyboard base. The present invention "widens" (horizontal direction) the keyboard base over what is required for the keyboard (does not use the inherent space that results because of the differences between displays and keyboards) creating a widened base (horizontal direction) used specifically for additional devices. In addition, the present invention "widens" (horizontal direction) the display to correspond to the widened base creating a widened display. Again, the present invention does not use space that is inherent because of differences between displays and keyboards as does *Trane*. *Trane* picks a keyboard with certain dimensions and likewise aspect ratio. *Trane* then picks a display which has the same width as the keyboard but will inherently have a larger height (vertical direction) than the keyboard. When the display is placed in a cover and *Trane* adds additional items (e.g., speakers 72) the height of the cover and the height of the keyboard base (that fits the cover) are determined. The height of the keyboard base according to *Trane* is inherently larger than his keyboard because of the inherent differences between any display and any keyboard. *Trane* does not teach widening the keyboard base to create a widened area for devices as recited in claims of the present invention. Rather, *Trane* utilizes this extra space much like designers who integrate pointing devices which are placed below (vertically) the keyboard.

(2) The Appellant argued on page 5, lines 4-5, of the Appeal Brief that "*Trane* does not teach any correspondence between the widened display base and the display device. In lines 13-14, *Trane* does not teach or suggest any correspondence between the display device and the lid and the keyboard base." The Examiner states his belief that this is not correct and states that *Trane* clearly teaches the relationship between the keyboard base, the keyboard, and the cellular telephone into the keyboard base." In support of this argument, he recites *Trane*, Fig. 2. where the Examiner states "*Trane* teaches a one to one correspondence between the widened keyboard base 12 and the matching display 14." Again, the Appellant was not arguing that *Trane* had no relationship defined between his disclosed elements; rather, the Appellant was arguing that *Trane* had no required design relationship as stated in the claims of the present invention. *Trane* is simply exploiting the inherent difference between the heights (vertical distances) of a display of a certain width (horizontal) and a corresponding keyboard with substantially equal width as explained in the preceding argument. *Trane* chooses a display and then picks a keyboard that will work with the display because the display sets the cover size which is required to cover the keyboard base. The present invention chooses a keyboard and purposely widens (horizontal direction) the keyboard base to create a widened area. At this point, the display would not have to be widened since a display as wide as the keyboard would be normal. However, the present invention widens (horizontal) the display to correspond not to the keyboard but to the widened keyboard base. For the invention of *Trane*, the display already has a height that is inherently greater than a keyboard which has the same width as the display. According to *Trane*, the keyboard base is increased in height to correspond to the display that inherently has a height greater than the keyboard. The Appellant has shown that normal displays have aspect ratios of approximately 4/3 where the width is greater than the height. The Appellant has also shown that keyboards have an aspect ratio of 2/1 where the width is greater than the height. If one used *Trane* to arrive at the present invention, then one would choose a keyboard which had an approximate aspect ratio of 2/1 (for a standard portable computer, this may be 11.5 inches by 5 inches). Adding a space to put *Trane's* cellular phone requires approximately 3-3.5 inches creating a keyboard base of approximately 11.5 inches by 8-8.5 inches. A standard display that was 12 inches wide has a height of approximately 9 inches. In this case, there is no motivation to increase the height of the display to correspond to the keyboard base with space for *Trane's* cellular phone. A standard display will work fine. To purposely increase the height of the display above what is needed would result in a display that no longer corresponded to the height

of the keyboard base. If one did increase the height of the display, then the keyboard base would have to be increased above what is needed for *Trane's* cellular phone, otherwise the cover housing the display would overlap the keyboard base when closed. The Appellant asserts that *Trane* does not widen his keyboard base to create a widened area, rather, *Trane* increases the height of his keyboard base to correspond to the inherent height difference between a display and a corresponding keyboard and *Trane* uses this space to place his cellular phone.

(3) The Appellant argued on page 5, line 15 of the Appeal Brief that "*Trane* does not teach or suggest the teachings of Claim 7 of the present invention by the LCD monitoring display." The Examiner states his belief that the Appellant misunderstood the Examiner's Final Office Action. In support of this argument, the Examiner again recites *Trane* column 9, line 43 through column 10, line 6. Claim 7 recites "The notebook computer of claim 1, wherein said widened I/O display area is used to display operational data relative to operation of said I/O device when said I/O device is sending or receiving signals to said notebook computer." The Examiner then states, "as can be seen from *Trane*, column 9, lines 56-61, clearly teaches "including customized or conventional software to handle telephone messaging, facsimiles, internet connections, etc." The Examiner makes other assertions regarding conventional and customized software which have nothing to do with the invention of Claim 7. The Examiner's new argument makes no sense as no software of any kind is recited in Claim 7. Therefore, the Appellant asserts that *Trane* does not teach or suggest using the widened I/O display area to display operational data relative to an I/O device operating in the I/O device area of Claim 1.

(4) The Appellant argued on page 6, paragraph starting at line 15 of the Appeal Brief more about how the "widened" and "corresponding" limitations are defined and interpreted by the Appellant. The Examiner states that he strongly traverses such argument and further states "the claimed 'widened' and 'corresponding' limitations are not clearly defined in the specification to overcome the teachings of the prior art and support Appellant's arguments." The Examiner further states that "SIZE or PROPORTION have been defined or discussed in the specification to overcome the teachings of the prior art." The following contains the arguments presented by the Appellant and cited by the Examiner as not clearly defining the "widened" and "corresponding" limitations.

In the Specification of the present invention, FIGS. 1, 2, 3, and throughout the description of these drawings, the term widened keyboard and widened display are clearly defined and

thereby indicate that the present invention uses the term widened in the claims to mean that area of the keyboard base corresponding to the width of the notebook computer. For example, in FIG. 1, a dotted line marks the widened area 108 and continuously extends to mark the widened I/O display area 103 on display 102. The Specification of the present invention states on page 7, line 27 through page 8, lines 1-2 "Embodiments of the present invention widen the base 107 creating a widened area 108. Widened area 108 has a recessed I/O area 105 which contains I/O connector means 104." Also see the Specification, page 8, lines 5-9. Likewise, the Specification of the present invention states on page 8, lines 5-9 "Notebook computer 100 also has, as the result of extension of the base 107, a widened I/O display area 103. I/O display area 103 makes the display 102 more useable either by enabling a single, very wide window, two or more smaller windows side-by side, or optionally an inserted window supporting an added I/O device installed or connected in recessed I/O area 105."

Relative to FIG. 2, again a continuous dotted line shows widened area 108 and the widened I/O display area 103 (that corresponds to the widened area 108). The Specification of the present invention states on page 10, lines 9-12 "Widened keyboard base 107 contains a keyboard 101. Display 102 has an extended display area 103. In this illustration, two display windows 109 and 110 are shown displayed side-by-side where display window 110 extends into extended display area 103." In this recitation, the Appellant used extended interchangeably with widened. It is clear, however, that these are the same areas partitioned by the dotted line. It is also clear that the widened display area 103 "corresponds" to the widened keyboard base 107.

Relative to FIG. 3, again a continuous dotted line shows widened area 108 and the widened I/O display area 103 (that corresponds to the widened area 108). The Specification of the present invention states on page 10, lines 14-17 "Widened keyboard base 107 contains a keyboard 101. Display 102 has a widened display area 103. In this illustration, display windows 109 and 112 are in display 101. An I/O display window 111, associated with I/O device 106, is displayed in the widened display area 103." The Appellant does not understand how the Examiner can state that the claimed limitations "widened" and "corresponding" are not clearly defined in the Specification of the present invention.

(5) The Appellant argued, on page 7, first paragraph starting at line 16 of the Appeal Brief, that the claimed "interface connection interposer is disposed between the interface signal connections means" are not taught by the *Trane* reference and the improper interpretation is used

by the Examiner. The Examiner states that he traverses this argument and cites *Trane*, Figure 3, elements 46, 56, and 58 which the Examiner states "represents the equivalent limitations of the claimed interposer of Claims 4-6." Element 46 is the opening in the area where *Trane* disposes his cellular telephone 16. First, the Appellant has shown that this area of *Trane* is not in the widened keyboard base of Claim 1 with a corresponding widened display area. The area of *Trane* is an area that is inherently present because displays and keyboards have different aspect ratios. Once a display with the same width of a keyboard is put in a cover for the keyboard base, then the keyboard base has to be extended so that the cover does not overlap the keyboard base. This space is utilized by *Trane* for his cellular phone 16 (other designers use this inherent space to put pointing devices). The present invention does not use this vertical space because there would be no widened display area "corresponding" to this vertical space. One would have to allocate a vertical portion of the display to read on the present invention. Using the teachings of *Trane*, the display is not "widened" to correspond to the area where *Trane* disposes his cellular phone 16. In fact, if *Trane* did increase the vertical dimension of his closable lid 36 to accommodate any increase in the vertical dimension of his keyboard base, *Trane* does not teach using this additional space for increasing the size of the display to create an extended I/O display area; rather, *Trane* uses this space for other devices (e.g., speakers 72). Secondly, *Trane* does not teach "that an interface connection interposer is disposed between the interface signal connection means and the I/O device" as recited in Claim 4. Element 46 in Figure 3 of *Trane* is the opening in the area where *Trane* disposes his cellular telephone 16 which is not in the I/O device area created by widening the keyboard base as recited in the present invention. *Trane* states that "the cellular telephone receiving opening 46 further includes an antenna connection 56 which contacts the cellular telephone antenna 50 of the cellular telephone 16 when the cellular telephone 16 is received within the cellular telephone receiving opening 46. Element 56 is a connector." *Trane* states that "the antenna connection 56 includes a protrusion 58 for (sic) releasably contacting the cellular telephone antenna 50 of the cellular telephone 16 and assisting in releasably maintaining the cellular telephone 16 in the cellular telephone receiving opening 46." This is the only explanation in *Trane* for element 58 and it states that element 58 is part of antenna connection 56 and it contacts antenna 50 as does connector 56. The only difference between element 58 and connector 56 is that one contacts the antenna 50 and the other "releasably contacts" the antenna 50. In any case, none of the elements are "an interface connection interposer disposed between said interface signal connection means and said I/O

device." If element 56 of *Trane* is an antenna connector 56 for the cellular phone 16, then what does it interface? The antenna 50 is only used by cellular phone 16. Antenna connector 56 is not "the interface signal connection means mounted within the I/O device area operable to couple signals from said notebook computer to an I/O device" as recited in Claim 1. Claim 4 adds the limitation that an interface connection interposer is disposed between said interface signal connection means (within the recessed area) and any I/O device of Claim 1. The Examiner has not shown where *Trane* teaches that an interposer is disposed between any interface connection means and an I/O device. For the Examiner to make his case, he would have to show a separate element (interface connection interposer) disposed between *Trane's* interface connector 54 and *Trane's* device (cellular phone 16); no such interface connector interposer is shown in Figure 3 or anywhere else in the teachings of *Trane*. The Appellant respectfully asserts that elements 46, 56, and 58, respectively, the cellular telephone receiving opening 46, antenna connection 56, and protrusion 58 which is part of element 56, definitely do not teach the limitation recited in Claim 4 of the present invention.

The Examiner further states that "the combination of (46, 56 and 58) teaches the compensation for both mechanical and signal routing differences between (16) and (54)." Elements 56 and 58 have nothing to do with the relationship between cellular phone 16 and element 54. Element 54 and elements 56 and 58 are shown on different ends of *Trane's* cellular phone 16. Further, *Trane* does not show the mating contacts on cellular phone 16 and contacts 54. The Appellant does not know how the Examiner can state that "there are clearly mechanical and electrical differences between element 16 and element 54." *Trane* shows that opening 46 is designed to match cellular phone 16. Why would *Trane* need an interposer to compensate for mechanical and electrical differences? Nowhere does *Trane* mention the word interposer; therefore, the Appellant does not understand why the Examiner insists that *Trane* teaches the interface connection interposer of Claim 4 of the present invention. The Examiner further states that "the claimed compensation function is a necessary part of the function of the *Trane* system" and cites *Trane* column 5, line 64 through column 6, line 12. Nowhere in this recitation does *Trane* make such an assertion. In this recitation, *Trane* only describes how the antenna connection 56 with protrusion 58 contacts antenna 50 of cellular phone 16 when cellular phone 16 is received within the cellular phone opening 46. Opening 46 is made for cellular phone 16; *Trane* does not teach needing any type of compensation.

(6) The Appellant argued on page 8, line 13 through page 11 of the Appeal Brief that the Examiner had not made a *prima facie* case in rejecting Claims 1-10 as being obvious and unpatentable over *Trane* by citing the teachings of *Trane* in Figures 1-3 and 6 and their respective description sections for support. The Examiner states that he strongly traverses "such length arguments" as being without support. The Examiner further states that "as seen by the Specification, no clear definition or support are given to widened; therefore, the Examiner used a dictionary definition. In addition, the Examiner states that the Appellant's arguments are not supported by the claims, due to the insufficient support from the Specification. The Appellant respectfully asserts that any one of ordinary skill in the art would clearly understand the invention recited in Claims 1-10. Further, the Appellant asserts that any one of ordinary skill in the art would clearly understand that the teachings of *Trane* in Figures 1-3 and 6 and their respective description sections do not teach or suggest all the limitations in Claims 1-10. The Appellant offers the arguments presented in section (1) of the Reply Brief and the following arguments presented in section (4) and repeated herein below:

In the Specification of the present invention, FIGS. 1, 2, 3, and throughout the description of these drawings, the term widened keyboard and widened display are clearly defined and thereby indicate that the present invention uses the term widened in the claims to mean that area of the keyboard base corresponding to the width of the notebook computer. For example, in FIG. 1, a dotted line marks the widened area 108 and continuously extends to mark the widened I/O display area 103 on display 102. The Specification of the present invention states on, page 7, lines 27 through page 8, lines 1-2 "Embodiments of the present invention widen the base 107 creating a widened area 108. Widened area 108 has a recessed I/O area 105 which contains I/O connector means 104." Also see the Specification, page 8, lines 5-9. Likewise, the Specification of the present invention states on page 8, lines 5-9 "Notebook computer 100 also has, as the result of extension of the base 107, a widened I/O display area 103. I/O display area 103 makes the display 102 more useable either by enabling a single very wide window, two or more smaller windows side-by side, or optionally an inserted window supporting an added I/O device installed or connected in recessed I/O area 105."

Relative to FIG. 2, again a continuous dotted line shows widened area 108 and the widened I/O display area 103 (that corresponds to the widened area 108). The Specification of the present invention states on page 10, lines 9-12 "Widened keyboard base 107 contains a keyboard 101. Display 102 has an extended display area 103. In this illustration, two display

windows 109 and 110 are shown displayed side-by-side where display window 110 extends into extended display area 103." In this recitation, the Appellant used extended interchangeably with widened. It is clear, however, that these are the same areas partitioned by the dotted line. It is also clear that the widened display area 103 "corresponds" to the widened keyboard base 107.

Relative to FIG. 3, again a continuous dotted line shows widened area 108 and the widened I/O display area 103 (that corresponds to the widened area 108). The Specification of the present invention states on page 10, lines 14-17 " Widened keyboard base 107 contains a keyboard 101. Display 102 has a widened display area 103. In this illustration, display windows 109 and 112 are in display 101. An I/O display window 111, associated with I/O device 106, is displayed in the widened display area 103." The Appellant clearly shows in which dimension the keyboard base 107 is widened using a dotted line, enunciators, and detailed descriptions relative to FIG. 1, 2, and 3. Likewise, the Appellant clearly illustrates using a dotted line, enunciators, and detailed descriptions relative to FIG. 1, 2, and 3 what is meant by widening the display 102 to form a widened display area 103 that "corresponds" to the widened keyboard base 107. The Appellant does not understand how the Examiner can continue to state that the claimed limitations "widened" and "corresponding" are not clearly defined in the Specification of the present invention. Further, the Appellant does not understand how the Examiner can state that Claims 1-10 have insufficient support in the Specification.

(7) The Appellant argued on page 12, first paragraph of the Appeal Brief that *Trane* does not teach or suggest the invention of Claim 2. The Appellant argued that for *Trane* to teach Claim 2, *Trane* had to teach all the limitations of Claim 1 also. The Appellant argued that while *Trane* shows a recessed area in his keyboard base, the other limitations of Claims 1 and 2 were not taught or suggested by *Trane*. The Appellant has been trying to convey that while *Trane* teaches placing cellular phone 16 into a recessed area above the keyboard this does not obviously lead to the invention of Claim 2 (including the limitations of Claim 1). In section (6), the Appellant has clearly shown where the Specification of the present invention supports in detail what is meant by purposely "widening the keyboard base 107" to create a widened I/O device area 103 and purposely widening the display 102 to create a widened display area 103 "corresponding" to the widened I/O device area. All portable (laptop) computers that have a keyboard with substantially the same width as the display have, as the result of the inherent differences in the width to height aspect ratios between displays and keyboards, a space (3-3.5

inches in the case of a standard 12-13 inch wide keyboard) inherently present is the keyboard base is made to equal the height of the display. *Trane* exploits this space by adding a recessed area to place a cellular phone. Every portable computer would require the keyboard base to be increased in the vertical direction so that the lid (containing the display) would cover the keyboard base when closed. One of ordinary skill in the art would understand that the display 16 of *Trane* was not widened to correspond to the keyboard base rather the vertical height of the keyboard base was extended so that the lid (with the display) did not extend over the keyboard base. This is why the Appellant argues that the recessed area 46 of *Trane* is not in the widened I/O area 108 created by widening keyboard base 107 as recited in Claim 2 of the present invention. Likewise, *Trane* does not teach the limitation in Claim 1, wherein the display is widened to create a widened display area 103 that corresponds to the widened I/O area 108. In the present invention, the display is not widened simply to make a wide display; rather, the display is widened to create a widened display area that corresponds to the widened I/O device area created by widening the keyboard base in the horizontal direction. *Trane* offers no such teaching or suggestion. When *Trane* has height in the lid for possible increasing display 14 over what is inherent because of the difference in the width to height aspect ratio of the display and the keyboard, *Trane* adds speakers 72.

(8) The Examiner states that the Appellant argued, on page 12, second paragraph of the Appeal Brief, that *Trane* does not teach or suggest the invention of Claim 3. The Examiner states that the Appellant argues that the cellular phone is a communication device and not an I/O device and secondly argues that the cellular phone of *Trane* is not an I/O device but a communication device. Further, the Examiner states that the Appellant argues that the Examiner used impermissible hindsight.

From the internet www.members.tripod.com:

"A cellular telephone is basically a two-way walkie-talkie that acts like a telephone. With a walkie-talkie, you either talk or you listen; with a cell phone, you can talk and listen at the same time. You can dial a number to place a call. You can receive calls. You can do fancy things like three-way calls, conference calls, call hold, and voice mail." A cellular telephone is basically a transmitter and a receiver. It is true that as time passes, telephones have added more and more functionality and as such one can find I/O devices which also have "cellular telephone"

communications ability. For example, is a display device that receives image data from a camera or the internet using cellular communication protocol a cellular telephone or an I/O device with cellular telephone capabilities? Today laptop computers have integrated cellular telephone capability such that the laptop can be moved from place to place and maintain its telephone connection. Is the laptop computer a cellular telephone? The Appellant asserts that an I/O device can have cellular telephone communication capabilities but a cellular telephone is a communication device.

Trane is not clear what is in his "cellular telephone 16." Since cellular telephone 16 has an antenna 50, it can transmit and receive signals using cellular telephone protocol. *Trane* does not offer any other information regarding whether cellular telephone 16 is a custom device or a standard device. If it is a standard device, the only contacts that are externally accessible, and that could interface with contacts 54, are the battery terminals which typically enable the internal batteries to be charged. If an external power source is used, it normally interfaces via a pluggable coaxial connector and not via open contacts. In fact, *Trane* states, in column 5, lines 44-64, that at least one of the contacts 54 is connected to a battery pack 52 within computer system 10. *Trane* also states that contacts 54 allow the cellular telephone to be recharged during non-use of the cellular telephone. Additionally, *Trane* states that contacts 54 allow the cellular telephone 16 to be powered by the power source of the computer system 12. Further, *Trane* states that contacts 54 connect antenna 50 of cellular telephone with computer system antenna 60 and connects signals processed by the cellular telephone to computer system 12. In column 6, lines 1-13, *Trane* states that antenna connection 56 connects to computer system antenna 60. In two different columns, *Trane* states that contacts 54 connect antenna 50 to antenna 60 and then states that connection 56 connects to antenna 60. *Trane* offers no further explanation of what he means by signals processed by the cellular telephone. Nowhere does *Trane* show antenna 60 connected to anything. *Trane* states that antenna 60 is connected to antenna 50 with contacts 54 and to connection 56. In Figure 6, *Trane* shows cellular telephone 16 coupled to what looks to be a bus of some kind and also to a "MODEM." This would imply that cellular telephone 16 receives digital signals from computer system 12 and couples digital signals to computer system 12. This led the Appellant to assert that the function of cellular telephone was one of a communication device, receive signals from computer system 12 via the bus or a MODEM and transmit these signals using cellular telephone protocol. Likewise, cellular telephone 16 receives

signals from a cellular telephone base tower and couples them to the computer system 12 via either bus. When cellular telephone is in opening 46, its keys are not visible so it is simply providing communication.

The Appellant did not state that opening 46 is not in an extended portion; rather, the Appellant has made extensive arguments in this Reply Brief that opening 46 of *Trane* is not in the extended portion (widened I/O device area 103) of the keyboard base 107 as recited by the claims of the present invention and extensively supported in the detailed description regarding FIGS. 1, 2, and 3. The Appellant has made extensive arguments in this Reply Brief that *Trane* does not teach or suggest that the keyboard base is widened to create a widened I/O device area. *Trane* uses the fact that the height of the keyboard base is inherently extended to match a display of its width because of the inherent difference in the width to height aspect ratio between displays and keyboards. This is why the Appellant asserts that only by hindsight would one arrive at the present invention using the teachings of *Trane*; *Trane increases the height of his keyboard base* to conform to a lid needed to hold a display that has the same width as the keyboard due to the state differences in aspect ratios. *Trane never teaches or suggests that he increases the height of his keyboard base 12 to create an I/O device area to accommodate his cellular telephone 16 and then he likewise increases the height of his display 14 to create a "corresponding" widened display area.* The Examiner did not show anywhere that *Trane* teaches the invention of Claim 1. The relationship between the widened I/O device area 108 and the corresponding widened display area 103 is simple not taught or suggested by *Trane* and thus the interface signal connection means of Claim 3 is disposed within a recessed I/O device area that is different from the teachings of *Trane*.

(9) The Examiner states that the Appellant repeatedly argues about the limitations of Claim 4 not being taught by *Trane*. The Examiner cites the same disclosure of *Trane* to support his assertion of traverse in section (9) as he presented in section (5) in his Examiner's answer to the Appeal Brief. The Appellant has made extensive arguments in section (5) against the cited disclosure of *Trane*. The Examiner states that the Specification of the present invention does not clearly define the meaning of interposer other than the functional meaning of the claim (Claim 4). The Appellant respectfully asserts that relative to FIG. 4 and the detailed description on page 6, lines 8-19, the meaning of interposer is clearly stated. As one example, the Appellant offers the following from the detailed description of FIG. 4:

"In another embodiment of the present invention, where connectors 448 and 450 are not matched, an interposer 444 is inserted between these two connectors to enable signal connection. Interposer 444 would have a connector feature compatible with connector 450 on the I/O device 449 side and a connector feature compatible with connector 448 on the I/O connection means 434 side. The signal wires (not shown) within the interposer 444 would make the required corresponding signal connections to ensure operation of I/O device 449. An interposer 444 may also be used, in embodiments of the present invention, when the physical form of the connector on an I/O device 449 or a physical feature of the I/O device 449 itself does not allow connection of the I/O device 449 directly to the motherboard 400 via connector 448. Other communication signals from other devices (not shown) may be coupled to bus 412 via communication adapter 443."

The elements (46, 56, and 58) of *Trane* cited by the Examiner do not teach or suggest the invention of Claim 4.

(10) The Examiner states that the Appellant repeatedly argued that the *Trane* reference does not teach or suggest the limitation of Claim 7. Claim 7 recites the following: "The notebook computer of claim 1, wherein said widened I/O display area is used to display operational data relative to operation of said I/O device when said I/O device is sending or receiving signals to said notebook computer." The Examiner states that *Trane* clearly teaches the limitation of Claim 7 and states "present invention further includes customized or conventional software to handle telephone messaging, facsimiles, internet connection, etc." The Examiner makes additional assertions regarding *Trane's* teachings regarding software stating that the portable computer (of *Trane*) uses customized or conventional software for facsimiles or internet connection, which leads to the limitations of Claim 7. The Examiner's reasoning is since status and control icons are usually displayed in the right bottom corner of a display this reads on the limitation of Claim 7. The Appellant has shown that *Trane* does not teach or suggest the notebook computer of Claim 1 in the preceding sections. *Trane* does not teach or suggest a notebook computer with a keyboard base is widened to create a widened I/O device area and the display is widened to create a widened display area "corresponding" to the widened I/O device area. Further, the Appellant has shown that *Trane* does not teach or suggest an I/O device disposed in an extended portion of the widened I/O device, wherein the widened I/O display area (of Claim 1) is used to display operational data relative to operation of the I/O device when the

I/O device is sending or receiving signals to the notebook computer. Claim 7 is directed to displaying operational data relation to operation of an I/O device disposed within the widened I/O device area specifically in the widened display area "corresponding" to the widened I/O device area. Claim 7 recites limitations defining specific relation between, the widened I/O device area, the corresponding widened display area, and the I/O device disposed in the widened I/O device area and where the operational data relative to the operation of the I/O device, so disposed, is displayed when the I/O device is sending and receiving signals from the notebook computer. The Appellant asserts that the Examiner has provided no teachings or motivation for one of ordinary skill in the art to go from the Examiner's control icons (on a fixed tool bar?) displayed in the lower right hand corner of a display to the invention of Claim 7.

(11) The Examiner states that the Appellant argues that the limitations of Claims 8-9 are not taught by the *Trane* reference. The Examiner states that he strongly traverses this argument and cites *Trane* column 9, lines 56-60. In the paragraph in column 9, lines 49-55, *Trane* states that his portable computer assembly 10 may also contain a telephone jack (not shown) for connecting a land telephone line to portable computer assembly 10. Then in the text cited by the Examiner, *Trane* states that includes software to handle telephone messaging, facsimiles, internet connections, etc. The software taught by *Trane* is simply determining what to send to cellular telephone 16 (communication device) which then transmits the information to a destination base on the connection established by the dialed telephone number. Since cellular telephone has its own Modem, it modulates one carrier frequency for outgoing data and demodulates a second carrier frequency for incoming data. In the Examiner citation, *Trane* states that the his software can control switching/setting between the regular telephone land line and the cellular telephone 16. In Figure 6, *Trane* shows that a MODEM and cellular telephone 16 are both coupled to what looks like a bus coupled to Floppy 28, power management board 82 and hard drive 26. The Appellant does not know how cellular telephone 16 "talks" to the storage devices (Floppy 28 and hard drive 26) since there is no connection shown to a storage controller or to the system board 22. *Trane* only shows cellular telephone 16 coupled to system board 22 via the unmarked MODEM. The Appellant does not understand why cellular telephone 16 needs an additional Modem since *Trane* shows cellular telephone 16 directly coupled to a bus. The MODEM in Figure 6 should be coupled to the connector (not shown) for the standard telephone land line.

Trane teaches software that does telephone messaging, facsimiles, internet connections, and switches between a land telephone line and a wireless broadcast cellular telephone. Therefore, the Examiner states that "this means at least two or more (sic) software to control communication between the cell phone to communicate with the internet and the land telephone line to communicate with the internet; in addition, *Trane* also teaches handling and switching between facsimiles via the cellular phone and the land telephone line." First, cellular telephone 16 is different from the unmarked MODEM in Figure 6. The Appellant believes that the MODEM is erroneously shown coupled to cellular telephone 16 and should be coupled to the connector (not shown) for coupling to a telephone land line. To access the internet, a user must dial the number of the access provider to establish an internet connection. The number of the access provider does not change whether the MODEM sends the number over a land line or cellular telephone sends the number over a wireless connection via the cellular telephone network. What one does with content (telephone message, facsimiles, internet requests, etc.) does not control communication between *Trane's* portable computer system 10 and *Trane's* communication devices (cellular telephone 16 and the MODEM). *Trane* teaches software that does a simple switching function (who sends the data) and software that processes content of the data (telephone messages, facsimiles, internet display data, etc.).

Claim 8 of the present invention recites the notebook computer of claim 1, wherein the notebook computer is operable to execute first communication software instructions controlling communication between the notebook computer and the I/O device (of Claim 1). Since the present invention recites I/O devices and not communication devices, there is a need for the CPU to recognize that an I/O device is coupled to the I/O connection means 104. The Specification discusses in detail that a connected I/O device may send an identification signal to the CPU and that the notebook computer or the I/O device may automatically load drive software for controlling the communication between the CPU and the I/O device. See summary of invention on page 3. Also see the detailed description relative to FIGS. 1, 2, 3, and 4.

Since the I/O devices (of Claim 1) may have many varied functions, one set of instructions may deal with communication necessary for setting the I/O device into particular operation modes, settings, etc., and other instructions may deal with processing of data transferred between the I/O device and the CPU. If the I/O device generates data (e.g., it is a camera), there may be communication protocol with control information (zoom, capture an

image) and communication protocol concerning data transfer (e.g., compression, encryption, etc.). Claim 9 recites that the notebook computer (of Claim 1), wherein the I/O device is operable to execute second communication software instructions controlling communication between said notebook computer and said I/O device.

The Appellant has argued that *Trane* does not teach or suggest the inventions of Claim 8 and 9 because *Trane* does not teach or suggest the notebook computer of Claim 1 with the limitations of Claims 8 and 9. The differences in the notebook computer of Claim 1 and the disclosure of *Trane* have been presented in detail in sections (1)-(10) of this Reply Brief.

(12) The Examiner states that on page 16, line 3 through page 17, line 7 that *Trane* does not teach the limitation of Claim 10. The Examiner states that cellular telephone 48 clearly teaches the limitation of Claim 10. Element 48 of *Trane* is a rechargeable battery pack, element 16 is the cellular telephone of *Trane*. In the Specification of the present invention, pages 8-9, the Appellant discusses in detail the types of I/O devices the Appellant suitable for practicing embodiments of the present invention. While the Appellant listed a Phone Pad and a Cellular Pad, the Appellant did not include a cellular telephone as taught by *Trane* because such a telephone is normally not equipped with contacts would allow the notebook computer of Claim 1 to identify the device nor does it have contacts for controlling the operations of the cellular telephone. While the cellular telephone 16 of *Trane* appears as though it has independent functionality away from the portable computer of *Trane*, the Appellant does not believe it is suitable for practicing embodiments of the present invention. However, an I/O device like a digital camera as identified in the Specification of the present invention does have an I/O port for coupling to a computer. This is why the Appellant does not believe that the disclosure of *Trane* reads on the invention of Claim 10 which recites the notebook computer (of Claim 1), wherein said I/O device (of Claim 1) has functionality wholly separate from any communication signaling or connecting with said notebook computer.

(13) The Examiner states that the Appellant argues on page 17, lines 8-18 that the rejections of Claims 11-14 are traversed for the same reasons as Claims 1-10. The Examiner states that this contradicts the Appellant's argument that Claims 1-14 are to be considered individually per the reasons set forth in Section VII of the Appeal Brief. The Examiner then states that the Appellant failed to establish why Claims 1-10 and 11-14 (sic) "are stand or fall

together." The Examiner further states that the Appellant entirely relied on the arguments of Claims 1-10 for Claims 11-14.

In rejecting Claims 11-14 in the Final Office Action, the Examiner simply stated that Claims 11-14 are not patentably distinct from Claims 1-10 and that the teachings of the claims 1-10 are similarly applied. The Examiner did not specifically address any steps in Claims 11-14. The Examiner effectively stated that these Claims 11-14 are rejected for the same reasons as Claims 1-10. When the Examiner offers no additional arguments for rejecting Claims 11-14, the Appellant asserts that there is no obligation for the Appellant to make arguments against evidence that was not presented.

The Examiner states that Claims 11-14 are not patentably distinct from Claims 1-10 and that the teachings of Claims 1-10 are similarly applied. Claims 11-14 recite method steps for interfacing an I/O device to a notebook computer and Claims 1-10 recite a notebook computer. The notebook computer of Claims 1-10 has features that employ method steps of Claims 11-14 and as such are both patentable. To the extent that the notebook computer of Claims 1-10 explicitly implement a method step of Claims 11-14, the Appellant has already shown that *Trane* does not teach or suggest these limitations. Therefore, the Appellant asserted that the rejections of Claims 11-14 under 35 U.S.C. § 103(a) as being unpatentable over *Trane* are traversed for the same reasons as Claims 1-10.

(14) The Examiner states that starting on page 17, line 19 of the Appeal Brief the Appellant generally presents arguments that were presented earlier. The Appellant was responding to the Examiner's rejection of Claims 1-14 under 35 U.S.C. § 103(a) as being unpatentable over *Trane* in view of *Saeguse*. Specifically, the Examiner stated that "the teachings of *Trane* applied to Claims 1-14 and are similarly applied" (see above for the teachings/rejections details). The Examiner stated that his arguments for rejecting Claims 1-14 over *Trane* applied when rejecting Claims 1-14 over *Trane* in view of *Saeguse*. For some reason the Examiner cites *Saeguse* as teaching that "notebook 3 is capable of wide screen display based on dot LCD and incorporates a communication functions." The Examiner further stated that "this is another/additional more specific support/evidence of the Examiner's 103 motivation 'obvious design choice' rationale." The Appellant argued that since the Examiner was only using *Saeguse* to support his assertion that the widened display of Claim 1 was simply a design choice, the Appellant need only show that *Saeguse* added nothing to the teachings of *Trane* that would

lead one of ordinary skill in the art to the invention of Claim 1. This was the argument that was made in the Final Office Action and repeated in the Appeal Brief.

The Examiner now states that he strongly traverses this argument for several reasons which will be addressed in order. Firstly, the Appellant fails to fully argue each and every claim separately, nor address the issues of the dependent Claims 2-14. The Examiner, by his own admission, states that the only thing that Saeguse adds to *Trane* is his assertion that Saeguse provides additional evidence that wide screen display is a design choice. Other than this, the Examiner did not present any additional evidence that Saeguse in combination with *Trane* taught or suggested any of the limitations in the dependent Claims 2-10 over what he had already presented. To say the Appellant did not address each and every claim is simply incorrect. The Examiner did not present any additional arguments for the combination of *Trane* and Saeguse to save his assertion that Saeguse added additional evidence that a wide screen display is a simple design choice.

As an additional counter to the Examiner's reasoning on design choice, the Appellant offers the following:

Let one choose a wide display screen as a matter of design choice. The Appellant has shown a normal display screen has a width to height aspect ratio of 4/3. For example, a 12 inch wide display screen would have a height of approximately 9 inches. Depending on the size, shape, and layout of the keys, a standard full size keyboard is 11.5-13 inches wide and 5-5.5 inches in height. Therefore, in this case, a 12 inch wide display when put in a cover would have about the same width as a keyboard base holding a standard size keyboard. However, the keyboard base height would have to be increased to match the height of the cover because of the inherent difference in the width to height aspect ratio of a display and a keyboard. The keyboard base is therefore larger in the vertical direction (height) than the keyboard and depending on where one places the keyboard in the keyboard base, the space will be above or below (vertical direction) the keyboard. *Trane* teaches that this space may be used for his cellular telephone opening 46. One arrives at the invention of *Trane* simply utilizing the inherent difference between the width to height aspect ratio of a standard 12 inch wide display and a standard full size keyboard.

Now suppose, according to the Examiner, the designer decided that he wanted a wider display than 12 inches (e.g., a 15 inch display). Remember there is no motivation other than the

designer is making a design choice that he wants a wider display. *Trane* already has his disclosed area for placing his cellular telephone 16 so there is no motivation to increase the width of the display to make a wider display other than a simple design choice as asserted by the Examiner. Because of his design choice, the designer now must increase the width of the cover to accommodate the wide screen display, the height of the cover could remain the same. Likewise, the designer must increase the width of the keyboard base to conform to his design choice of a wide screen display. The portable computer of *Trane* would now have a space above (vertical direction) his keyboard and a space to one or both sides (horizontal direction) of his keyboard. *Trane* had no motivation to increase the width (widen his keyboard base) to create a widened I/O device area as recited by Claim 1 because he already has his needed space for his cellular telephone 16. In the present invention, the keyboard base 107 is widened (horizontal direction) to create a widened I/O display area 108. At this time, display 102 does not have to be widened, only the cover containing display 102 need be widened to fully cover the keyboard base. The present invention purposely increases display 102 to create a widened I/O display area 103 "corresponding" to the widened I/O device area 108. Following the Examiner's reasoning and using a wide screen display as a design choice, leads to a keyboard base that is bigger than needed for a standard size keyboard and for the cellular telephone 16 of *Trane*. Additional claims in the present invention use the widened display area specifically to display operational data corresponding to an I/O device disposed in the created widened I/O device area. The present invention increases the width of the keyboard base to create the widened I/O device area and then increases the display width to create the corresponding widened I/O display area. The relationship between the elements of the present invention recited in Claims 1-10 and 11-14 are not taught or suggested by *Trane* or Saeguse either singly or in combination.

Secondly, the Examiner states that the Appellant contradicts the Appellant's "GROUPING OF CLAIMS" statement. The Appellant has already addressed this issue in detail in section (13) of this Reply Brief.

Thirdly, the Examiner states that the Appellant's arguments are not supported by the claims in view of the Specification. Specifically, the Examiner states the Appellant is giving specific meaning "widened display." The Appellant has argued this point in extensive detail throughout this Reply Brief and again relative to the first point in this section (15).

Fourthly, the Examiner states that *Trane* clearly motivates to use any available and custom designed display; in addition, the Examiner states that Saeguse motivates to use a specific wide screen type. *Trane* states that any display may be used with his invention; however, *Trane* states that his preferable size is 13 inches or less. The cover contains the display and the keyboard contains the keyboard and the cover and the keyboard base are the same size so that the cover protects the display and elements in the keyboard base when closed. One does not chose the keyboard size without considering the display or the display without considering the keyboard. The portable computer system of *Trane* has a display, a keyboard, a printer, a paper supply, and a cellular telephone communication device. Nowhere does *Trane* ever teach or suggest that the keyboard base is wider than the display. *Trane* adds his printer onto the keyboard base and he adds his paper supply to one side and under the keyboard base. *Trane* shows his cellular telephone above (vertical direction) his keyboard in a space that results from the inherent differences in the width to height aspect ratio of a display that is the same width as a keyboard. Nowhere does *Trane* disclose or suggest making the keyboard base wider than his keyboard to create the widened I/O device area as recited in Claim 1 of the present invention.

Fifthly, the Examiner states that the Appellant arguments ignore common design practice of commercially available notebook/laptop. The Examiner states that "(sic) one skill in the art knows that the almost all of the notebook/laptop sold in the U.S. have the same basic form factor with a relationship between the keyboard portion (bottom casing) and the display portion (top casing); the top and bottom portions have a relationship of being the same size (vertical and horizontal dimension)." The Examiner further states that "this means that when a designer chooses a widened display, it is logical to choose the same sized keyboard/bottom casing." Additionally, the Examiner states that as a consequence "*Trane's* motivation of using a wide/widened display automatically applies to use a wide/widen keyboard. The relationship between the display section and the keyboard section is (sic) inseparateable one." Finally, the Examiner states that "the Appellant's arguments are mostly based on the Appellant (sic) given meaning of 'widened' and 'corresponding'; however, such Appellant meaning are not supported by the Specification or the claims. The Specification fails to define and support the specific arguments of the Appellant."

The Appellant has exhaustively detailed the natural difference between the width to height aspect ratio of a display and a keyboard. Using normal proportions, when a keyboard and a display have the same width (horizontal direction) this display height is greater than the

keyboard height. If the display and keyboard are part of a notebook or portable computer which has a clam shell design such that a cover section housing the display fits over a base section housing the keyboard, then the base section will have extra height space (vertical direction) when the keyboard and the display are the same size. This is inherent. If the keyboard is a standard full size, its width is between 11.5 -13 inches depending on the size, shape and pattern of the keys in the keyboard. This means that a standard full size keyboard has approximately the same width as a 12 inch wide display which would have a 9 inch height. This is true for the standard 15 inch (diagonal) LCD display used on many desktop computers. If a designer uses a display that is wider than a full size keyboard in a portable computer, the keyboard does not have to change it is already full size. However, the keyboard base or base section does have to increase to accommodate the wider display. The keyboard base would have to be made wider or widened. The question is why was the keyboard base widened? It was widened to correspond to the wider display and not to create a widened I/O device 108 as recited in Claim 1 of the present invention. Neither *Trane* nor Saeguse, singly or in combination, teach or suggest the invention of Claim 1. Claim 1 teaches the opposite of what is asserted by the Examiner. The keyboard base 107 (base section) is made wider (widened horizontally) than is necessary to accommodate a chosen keyboard (standard or other) to create a widened I/O device area 108. The cover section must also be widened (horizontal direction) in response to widening of keyboard base 107. Without embodiments of the present invention, the relationship between the display and the keyboard do not have to change. Using embodiments of the present invention, not only is the cover section widened, the display 102 is made wider (widened horizontally) "corresponding" to the widened keyboard base creating a widened I/O display area 103. The keyboard is not widened. This particular relationship between the widened keyboard base and the widened display is not taught or suggested by either *Trane* or Saeguse, singly or in combination.

The Appellant has shown in exhaustive detail in this Reply Brief where the Specification defines and illustrates the meaning of widened keyboard base and widened display and how the widened I/O display area corresponds to the widened I/O device area.

In Summary, the Examiner states that the Appellant's arguments hinge on interpretations of the claimed (sic) "widened keyboard", "widened display" and "corresponding". As a summary the Appellant has described and illustrated in FIGS. 1-3 that the keyboard base 107 (not the keyboard) is widened over what is required to accommodate a chosen keyboard to create a widened I/O device area 108.

If one is practicing the invention of Trane, a display the same width as the keyboard fitted in a cover section would require a base section that inherently provided the space for Trane's cellular telephone without requiring the keyboard base to be widened over what is required for the chosen keyboard because the width to height aspect ratio of a display is larger than that of a keyboard of the same width.

The Appellant has described and illustrated in FIGS. 1-3 with dotted lines that the display 102 is widened to create a widened I/O display area 103 "corresponding" to the widened I/O device 108. The Appellant respectfully asserts that the Examiner erroneously relies on a dictionary definition for these terms which are described and illustrated in detail in FIGS. 1-3 and their detailed description.

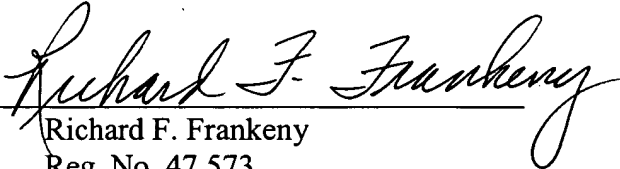
Trane does not teach or suggest any correspondence in the physical relationship between the inherent area where Trane disposes his cellular telephone 16 and a specific portion of his display that was widened or extended in response to his creating the inherent area.

For the above reasons, the Appellant asserts that the rejections of Claims 1-14 should be overturned and the claims should be allowed.

Respectfully submitted,

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